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10/699,820

11/04/2003

Sung Uk Moon

244927US90

4464

22850

7590

10/03/2006

EXAMINER

DEAN, RAYMOND S

C. IRVIN MCCLELLAND

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.

1940 DUKE STREET

ALEXANDRIA, VA 22314

ART UNIT

PAPER NUMBER

2618

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/699,820

Applicant(s)

MOON ET AL.

Examiner

Raymond S. Dean

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1103,0404.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 – 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Trossen et al. (US 7,054,643).

Regarding Claim 1, Trossen teaches a radio communication system for performing multicast communication comprising: a reception ability value collector configured to collect a reception ability value of a mobile station belonging to a specific multicast group (Cols: 3 lines 35 – 39, 4 lines 6 – 11, 5 lines 20 – 43, 6 lines 4 – 24, Table 1); a transmission method determiner configured to determine a transmission method of transmitting information in accordance with the collected reception ability value (Col. 5 lines 38 – 39, modulation-coding schemes); a transmitter configured to transmit the information to the mobile station using the determined transmission method (Figures 1, 2); and a radio resource manager configured to manage available radio resources (Col. 6 lines 16 – 20, efficiently managing the frequency spectrum, which is a radio resource); and wherein the transmission method determiner determines the transmission method in accordance with the reception ability value and the available radio resources, so that a mobile station equipped with a predetermined reception ability can receive the information using the determined transmission method (Cols. 5 lines 20 – 43, 6 lines 4 – 24, 7 lines 60 – 67, 8 lines 1 – 13).

Regarding Claim 2, Trossen teaches a radio station comprising: a reception ability value collector configured to collect a reception ability value of a mobile station belonging to a specific multicast group (Figure 5, Cols: 3 lines 35 – 39, 4 lines 6 – 11, 5 lines 20 – 43, 6 lines 4 – 24, 10 lines 1 – 4, Table 1); a transmission method determiner configured to determine a transmission method of transmitting information in accordance with the collected reception ability value (Col. 5 lines 38 – 39, modulation-coding schemes); a transmitter configured to transmit the information to the mobile

station using the determined transmission method (Figures 1, 2); and wherein the transmission method determiner determines the transmission method so that a mobile station equipped with the best reception ability can receive the information using the determined transmission method (Cols. 5 lines 20 – 43, 6 lines 4 – 24, 7 lines 60 – 67, 8 lines 1 – 13, this multicast system enables all wireless terminals to reliably receive data regardless of data processing ability).

Regarding Claim 3, Trossen teaches a radio station comprising: a reception ability value collector configured to collect a reception ability value of a mobile station belonging to a specific multicast group (Figure 5, Cols: 3 lines 35 – 39, 4 lines 6 – 11, 5 lines 20 – 43, 6 lines 4 – 24, 10 lines 1 – 4, Table 1); a transmission method determiner configured to determine a transmission method of transmitting information in accordance with the collected reception ability value (Col. 5 lines 38 – 39, modulation-coding schemes); a transmitter configured to transmit the information to the mobile station using the determined transmission method (Figures 1, 2); and wherein the transmission method determiner determines the transmission method so that a mobile station equipped with the worst reception ability can receive the information using the determined transmission method (Cols. 5 lines 20 – 43, 6 lines 4 – 24, 7 lines 60 – 67, 8 lines 1 – 13, this multicast system enables all wireless terminals to reliably receive data regardless of data processing ability).

Regarding Claim 4, Trossen teaches a radio station comprising: a reception ability value collector configured to collect a reception ability value of a mobile station belonging to a specific multicast group (Figure 5, Cols: 3 lines 35 – 39, 4 lines 6 – 11, 5

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lines 20 – 43, 6 lines 4 – 24, 10 lines 1 – 4, Table 1); a transmission method determiner configured to determine a transmission method of transmitting information in accordance with the collected reception ability value (Col. 5 lines 38 – 39, modulation-coding schemes); a transmitter configured to transmit the information to the mobile station using the determined transmission method (Figures 1, 2); and a radio resource manager configured to manage available radio resources (Col. 6 lines 16 – 20, efficiently managing the frequency spectrum, which is a radio resource); and wherein the transmission method determiner determines the transmission method in accordance with the reception ability value and the available radio resources, so that a mobile station equipped with a predetermined reception ability can receive the information using the determined transmission method (Cols. 5 lines 20 – 43, 6 lines 4 – 24, 7 lines 60 – 67, 8 lines 1 – 13).

Regarding Claim 5, Trossen teaches all of the claimed limitations recited in Claim 2. Trossen further teaches wherein the reception ability value is defined by at least one of a demodulation method, a reception buffer size, a computing processing ability, an error correction method and an interleaving length (Col. 5 lines 24 – 27, computing processing capability to process the transmitted data rate).

Regarding Claim 6, Trossen teaches all of the claimed limitations recited in Claim 2. Trossen further teaches wherein the transmission method is determined by at least one of a modulation method, transmission power, a method of organizing the information hierarchically, the amount of data, the numbers of codes, an error

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correction method, the numbers of blocks, an interleaving length and a rate matching method (Col. 5 lines 38 – 39, modulation-coding schemes).

Regarding Claim 7, Trossen teaches all of the claimed limitations recited in Claim

2. Trossen further teaches wherein the radio resource is defined by at least one of transmission power, the numbers of codes, the numbers of frequencies and propagation conditions (Col. 6 lines 16 – 20, efficiently managing the frequency spectrum which comprises the number of frequencies).

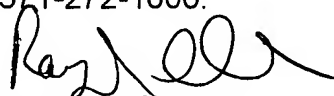
Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

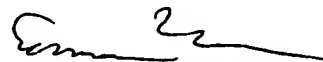
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Raymond S. Dean
September 20, 2006



EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600